

AMENDMENT UNDER 37 CFR § 1.111
Serial No. 09/809,218

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. [CANCELLED]
2. [CANCELLED]
3. [CANCELLED]
4. [CANCELLED]
5. [CANCELLED]
6. [CANCELLED]
7. [CANCELLED]
8. [CANCELLED]
9. [CANCELLED]
10. [CANCELLED]
11. [CANCELLED]
12. [CANCELLED]
13. [CANCELLED]
14. [CANCELLED]

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15. [CANCELLED]
16. [CANCELLED]
17. [CANCELLED]
18. [CANCELLED]
19. [CANCELLED]
20. [CANCELLED]
21. [CANCELLED]
22. [CANCELLED]
23. [CANCELLED]
24. [CANCELLED]
25. [CANCELLED]
26. [CANCELLED]
27. [CANCELLED]
28. [CANCELLED]
29. [CANCELLED]
30. [CANCELLED]
31. [CANCELLED]

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32. [CANCELLED]

33. [CANCELLED]

34. [CURRENTLY AMENDED] A repeater as claimed in claim ~~33~~ 37, wherein the digital micro-controller is adapted to generate respective uplink and downlink gain control signals for selectively controlling respective gain control blocks in each of the uplink and downlink signal paths.

35. [CURRENTLY AMENDED] A repeater as claimed in claim ~~33~~ 37, wherein the digital micro-controller is adapted to control the gain of the downlink path in accordance with a power level of RF signals detected in the uplink path, whereby a coverage area of the repeater is dynamically adjusted in accordance with at least a distance between the repeater and the WCD.

36. [NEW] A repeater adapted to transparently mediate RF signal traffic between a wireless communications device (WCD) and a wireless communications network, the repeater comprising:

a first antenna unit adapted to maintain a network link with a transceiver of the wireless communications network; and

a second antenna unit coupled to the first antenna unit and adapted to maintain a local link with the wireless communications device within a local coverage area of the repeater, the second antenna unit comprising an integral RF signal processor adapted to selectively amplify respective uplink and downlink RF signals of the wireless communications device.

wherein the RF signal processor comprises:

uplink and downlink signal paths adapted to convey RF signal traffic of respective uplink and downlink channels of the wireless communications network;

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a detector adapted to detect at least one of the uplink and downlink RF signals of the WCD within the uplink and downlink signal paths; and

a controller adapted to selectively control a gain of each of the uplink and downlink signal paths

wherein the detector is adapted to acquire weak desired RF signals embedded within a broadband channel, and comprises:

a narrow-band path adapted to sample RF signal traffic within a selected one of the uplink and downlink paths; and

a signal detector adapted to detect at least a power level of a weak desired signal within the sample, wherein a sample bandwidth of the sample is selected based on an anticipated signal-to-noise ratio within the selected path, and a desired rate of sampling across the entire bandwidth of the selected path.

37. [NEW] A repeater adapted to transparently mediate RF signal traffic between a wireless communications device (WCD) and a wireless communications network, the repeater comprising:

a first antenna unit adapted to maintain a network link with a transceiver of the wireless communications network; and

a second antenna unit coupled to the first antenna unit and adapted to maintain a local link with the wireless communications device within a local coverage area of the repeater, the second antenna unit comprising an integral RF signal processor adapted to selectively amplify respective uplink and downlink RF signals of the wireless communications device.

wherein the RF signal processor comprises:

uplink and downlink signal paths adapted to convey RF signal traffic of respective uplink and downlink channels of the wireless communications network;

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a detector adapted to detect at least one of the uplink and downlink RF signals of the WCD within the uplink and downlink signal paths; and

a controller adapted to selectively control a gain of each of the uplink and downlink signal paths, wherein the controller comprises:

a digital micro-controller adapted to generate a gain control signal in response to at least the detected RF signals; and

at least one respective gain control block disposed in each of the uplink and downlink paths, each gain control block being adapted to control a gain of the respective path in accordance with the gain control signal.